By Kim Gillespie
Chief, Public Affairs Office
U.S. Army Corps of Engineers
Engineering and Support Center, Huntsville, Ala.

The U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville's role in support the Corps' campaign goals includes its chemical demilitarization mission. Construction of the Blue Grass Chemical Agent Destruction Pilot Plant will enable the U.S. to continue to destroy the nation's chemical stockpiles. Destroying the chemical stockpile will eliminate the potential for accidents and terrorism, and further protect the public and the environment.

Huntsville Center's Chemical Demilitarization program functions as the Corps of Engineers Life-Cycle Project Manager for facility design and construction, equipment design, acquisition, and building complex facilities at continental U.S. facilities that use a variety of technologies to safely destroy the nation's stockpile of aging chemical weapons. Additionally, the program oversees the construction management of the Cooperative Threat Reduction Program's Russian Weapon's Destruction Facility in Shchuch'ye, Russia.

Huntsville Center has administered the Architect Engineer designs and Systems Contractor construction of six facilities in the United States, but the Blue Grass Chemical Agent Destruction Pilot Plant will be unique from its sister facilities. It will incorporate elements such as the material handling systems that are common to the incineration facilities at Anniston, Ala., Pine Bluff, Ark., and Umatilla, Ore., and the agent reactor vessels at the bulk agent plants at Aberdeen Proving Ground, Md., and Newport, Ind. It will also incorporate a supercritical water oxidation process to treat the neutralized agent byproduct on site.

"We are using alternative technology, a wet chemistry agent neutralization very similar to the Aberdeen and Newport bulk agent plants," explained Terry Stroschein, project manager for the Blue Grass facility. "The site has rockets and projectiles containing three types of agent, GB, VX and mustard," he said.

First-of-a kind equipment to be used at the Blue Grass Pilot Plant includes Rocket Cutting Machines, Modified Rocket Shear Machines, Agent Batch Hydrolyzers, Munitions Washout System, and Metal Parts Treaters. These are all needed to process the rockets and projectiles. "The energetics will be separated from the rocket warheads and processed separately", Stroschein said.

These are all part of the primary destruction process. A secondary process, Supercritical Water Oxidation, treats the liquids that come out of the primary process. Organic components in water solution are subjected to high pressure and temperature in order to be turned into relatively harmless salts and gases like carbon dioxide.

According to Stroschein, Huntsville Center's Chemical Demilitarization program personnel work closely with the systems contractor, Bechtel Parsons Blue Grass. "One of the biggest challenges we've had is funding," said Stroschein. While Bechtel Parson Blue Grass and the Corps have continued to examine design changes to lower costs, the funding delays will probably negate any cost savings, noted Stroschein. The current project cost is estimated at $3 billion.

Construction work began at the site in April 2006, and work so far has included the construction of the main plant access road and restricted area fencing which are both security-related. "The Blue Grass site is also unique from other stockpile sites in that they also store conventional munitions and are currently supporting the war theatre which makes accessing the area a challenge," he explained.

Huntsville Center's commander, Col. Larry McCallister, made his first visit to Blue Grass in April and met with Assembled Chemical Weapons Alternative Site Manager James Fritsche, the Blue Grass Army Depot Commander Col. Richard J. Mason, Jr., and Louisville District Project Engineer Maj. Jeff Hoover. The Corps' Louisville District is executing the support contracts for the facility.

Col. McCallister also visited with Huntsville Center Blue Grass Resident Office. "Right now we have a staff of seven, but we expect to have fifteen to twenty people when we reach the peak of construction (anticipated to be in fiscal year 2009)," Stroschein said. "We've got a great team, and they are doing everything they can with the funding we are allocated," he added.